

REMARKS

In the above amendment, the specification has been amended to identify Applicant's priority applications. Claim 34 has also been amended so as not to refer to now canceled claims.

Claims 46-94 have been added in the above amendment. In accordance with the requirements of 37 CFR 1.607(c) and MPEP 2307.05, the undersigned wishes to advise the Examiner that the claims now pending (by way of the present amendment and as originally filed) correspond exactly or substantially to claims 1-53 of US Patent 6,153,402 issued November 28, 2000.

The amendments above are fully supported by the specification as filed, and accordingly, do not introduce new matter.

The amendments to the specification and claims are illustrated in the attached sheets entitled "Marked Up Version to Show Changes Made". For the Examiner's convenience, a clean copy of the now pending claims 34-39 and 46-94 are provided above.

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MARKED UP VERSION TO SHOW CHANGES MADE

IN THE SPECIFICATION:

On page 1 of the specification, in the paragraph on lines 8-12, the text has been amended as follows:

--- Related Applications

This non-provisional application is a divisional application of U.S. Serial no. 08/828,683 filed March 31, 1997, which is a continuation-in-part application of U.S. Serial no. 08/625,328 filed April 1, 1996 and U.S. Serial no. 08/710,802 filed September 23, 1996, the contents of which are incorporated herein by reference. ---

IN THE CLAIMS:

Please cancel claims 1-33 and 40-45 without prejudice.

Please amend claim 34 as follows:

34. (Amended) Isolated nucleic acid encoding [the] Apo-3 [of claim 22, the extracellular domain sequence of claim 23 or the death domain sequence of claim 27] polypeptide comprising amino acid residues 1 to 417, 25 to 417, 25 to 198, or 338 to 417 of SEQ ID NO:6, or a biologically active variant thereof.

Please add the following claims:

---46. An isolated nucleic acid molecule comprising a polynucleotide encoding amino acids 19 to 204 of SEQ ID NO:6.

47. The isolated nucleic acid molecule of claim 46 which comprises nucleotides 146 to 700 of SEQ ID NO:9.

48. The isolated nucleic acid molecule of claim 46 further comprising a heterologous polynucleotide.

49. The isolated nucleic acid molecule of claim 48, wherein said heterologous polynucleotide encodes a heterologous polypeptide.

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50. A vector comprising the isolated nucleic acid molecule of claim 46.

51. A host cell comprising the isolated nucleic acid molecule of claim 46 operatively associated with a heterologous regulatory sequence.

52. A method for making a vector comprising inserting an isolated nucleic acid molecule of claim 46 into a vector.

53. A method of making a host cell comprising introducing the vector of claim 50 into a host cell.

54. A host cell produced by the method of claim 53.

55. A method for producing a polypeptide encoded by said isolated nucleic acid molecule, comprising culturing the host cell of claim 51 under conditions such that said polypeptide is expressed and recovering said polypeptide.

56. A host cell comprising the isolated nucleic acid molecule of claim 46.

57. A method for producing a polypeptide encoded by said isolated nucleic acid molecule, comprising culturing the host cell of claim 56 under conditions such that said polypeptide is expressed and recovering said polypeptide.

58. An isolated nucleic acid molecule comprising a polynucleotide encoding a polypeptide having the mature amino acid sequence encoded by the cDNA clone contained in ATCC Deposit No. 55820.

59. The isolated nucleic acid molecule of claim 58, wherein said polynucleotide encodes a polypeptide having the complete

amino acid sequence encoded by the cDNA clone contained in ATCC Deposit No. 55820.

60. The isolated nucleic acid molecule of claim 58 further comprising a heterologous polynucleotide.

61. The isolated nucleic acid molecule of claim 60, wherein said heterologous polynucleotide encodes a heterologous polypeptide.

62. A vector comprising the isolated nucleic acid molecule of claim 58.

63. A host cell comprising the isolated nucleic acid molecule of claim 58 operatively associated with a heterologous regulatory sequence.

64. A method for making a vector comprising inserting an isolated nucleic acid molecule of claim 58 into a vector.

65. A method of making a host cell comprising introducing the vector of claim 62 into a host cell.

66. A host cell produced by the method of claim 65.

67. A method for producing a polypeptide encoded by said isolated nucleic acid molecule, comprising culturing the host cell of claim 63 under conditions such that said polypeptide is expressed and recovering said polypeptide.

68. A host cell comprising the isolated nucleic acid molecule of claim 58.

69. A method for producing a polypeptide encoded by said isolated nucleic acid molecule, comprising culturing the host cell of

claim 66 under conditions such that said polypeptide is expressed and recovering said polypeptide.

70. An isolated nucleic acid molecule encoding a polypeptide comprising at least 30 contiguous amino acids of a polypeptide having the amino acid sequence from 339 to 409 in SEQ ID NO:6, or a nucleic acid molecule having a nucleotide sequence complementary thereto.

71. The isolated nucleic acid molecule of claim 70 wherein said polypeptide comprises at least 50 contiguous amino acids of a polypeptide having the amino acid sequence from 339 to 409 in SEQ ID NO:6.

72. The isolated nucleic acid molecule of claim 70 comprising a polynucleotide encoding amino acids 339 to 409 of SEQ ID NO:6.

73. The isolated nucleic acid molecule of claim 70 further comprising a heterologous polynucleotide.

74. The isolated nucleic acid molecule of claim 73, wherein said heterologous polynucleotide encodes a heterologous polypeptide.

75. A vector comprising the isolated nucleic acid molecule of claim 70.

76. A host cell comprising the isolated nucleic acid molecule of claim 70 operatively associated with a heterologous regulatory sequence.

77. A method for making a vector comprising inserting an isolated nucleic acid molecule of claim 70 into a vector.

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78. A method of making a host cell comprising introducing the vector of claim 75 into a host cell.

79. A host cell produced by the method of claim 78.

80. The host cell of claim 76 wherein said isolated nucleic acid molecule encodes a polypeptide comprising at least 30 contiguous amino acids from residues 339 to 409 in SEQ ID NO:6.

81. A method for producing a polypeptide comprising culturing the host cell of claim 80 under conditions such that the polypeptide encoded by said nucleic acid molecule is expressed and recovering said encoded polypeptide.

82. A host cell comprising the isolated nucleic acid molecule of claim 70.

83. The host cell of claim 82, wherein said isolated nucleic acid molecule encodes a polypeptide comprising at least 30 contiguous amino acids from residues 339 to 409 in SEQ ID NO:6.

84. A method for producing a polypeptide comprising culturing the host cell of claim 82 under conditions such that the polypeptide encoded by said nucleic acid molecule is expressed and recovering said encoded polypeptide.

85. Isolated nucleic acid encoding an Apo-3 polypeptide, wherein said Apo-3 polypeptide has about 80% identity to the sequence of amino acid residues 1 to 417 of SEQ ID NO:6 and said Apo-3 polypeptide inhibits or stimulates apoptosis or NF-KB in at least one type of mammalian cell.

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86. The nucleic acid of claim 85, wherein said encoded Apo-3 polypeptide has about 90% identity to the sequence of amino acid residues 1 to 417 of SEQ ID NO:6.

87. The nucleic acid of claim 86, wherein said encoded Apo-3 polypeptide has about 95% identity to the sequence of amino acid residues 1 to 417 of SEQ ID NO:6.

88. A vector comprising the nucleic acid of claim 85.

89. A host cell comprising the vector of claim 88.

90. A process of using a nucleic acid molecule encoding Apo-3 to effect production of Apo-3 comprising culturing the host cell of claim 89.

91. Isolated nucleic acid encoding an Apo-3 polypeptide, wherein said Apo-3 polypeptide (a) is a fragment of the sequence of amino acid residues 1 to 417 of SEQ ID NO:6, (b) lacks a transmembrane domain and/or cytoplasmic domain of native sequence human Apo-3 polypeptide, and (c) inhibits or stimulates apoptosis or NF-KB in at least one type of mammalian cell.

92. A vector comprising the nucleic acid of claim 91.

93. A host cell comprising the vector of claim 92.

94. A process of using a nucleic acid molecule encoding Apo-3 to effect production of Apo-3 comprising culturing the host cell of claim 93. ---